

Final Review 3 '0910

- 1) Use the fundamental counting principle to determine the number of possible outcomes for the following situations:
 - a) A license plate consisting of 4 different numbers followed by 3 different letters.
 - b) Selecting 4 people out of 25 to serve on the student council.
- 2) In one and one basketball, George has shown to have a 70% chance of making his first shot and an 80% chance of making the second.
 - a) Draw a “rug model” for this situation, using a separate sheet of graph paper.
 - b) Which outcome occurs most frequently, 0 points, 1 point or 2 points?
 - c) What is George’s Expected Value (average points/foul)?
- 3) If you draw cards out of a standard deck, without replacing them, what are the following probabilities.
 - a) $P(\text{a club, 3 of hearts}) =$
 - b) $P(7 \text{ of hearts, 3 of clubs}) =$
 - c) $P(\text{a 10, a King}) =$
 - d) $P(\text{a diamond, a diamond}) =$
 - e) $P(\text{a heart, a spade}) =$
- 4) When you roll two standard dice, what is the probability that you will roll:
 - a) a sum of 6?
 - b) a 4 and a 1?
 - c) two even numbers?
- 5) April and Jenny tossed a coin 60 times and got heads 28 times. What is the observed probability of tossing a tail using Lynn and Dawns results? What is the theoretical probability of a fair coin?
- 6) Use the fundamental counting principle to determine the number of possible outcomes: Making a sundae with a choice of 5 different ice creams, 3 toppings, and 2 syrups.